

## THE INSECT PREY OF A WHITE-THROATED NEEDLETAIL *HIRUNDAPUS CAUDACUTUS* (LATHAM) (AVES: APODIDAE)

C.J. BURWELL and C.R. PAVEY

*Department of Entomology, University of Queensland, Brisbane, Qld, 4072*

### Abstract

The stomach of a male *Hirundapus caudacutus* contained 622 prey insects, representing three families and four species. Winged ants of the genus *Pheidole* Westwood were the dominant prey (613 specimens).

### Introduction

Swifts and swiftlets (Apodidae) are birds specialized for life on the wing, feeding on airborne insects and spiders (Lack & Owen 1955; Harrison 1976). Detailed information on their diet and prey preferences is difficult to obtain because of these aerial habits. Most data have come from the examination of the food pellets given to the young at nesting colonies (eg. Harrison 1976; Smyth 1980). The white-throated needletail (*Hirundapus caudacutus*) is a common, non-breeding migrant to the east coast of Australia from October to April (Blakers *et al.*, 1984). Data on its diet in this country have been collected only by chance observation of feeding or examination of stomach contents (see references in Barker & Vestjens 1989).

This note provides information on the relative abundance of different insects in the stomach of *H. caudacutus*.

### Materials and Methods

The stomach of an adult male *H. caudacutus*, found at Caloundra, south-eastern Queensland, on 12 February 1991 was opened, flushed with 80% ethanol, and the prey items identified and counted. The number of ants was determined by counting the head capsules.

### Results and Discussion

The stomach contained the remains of 622 insects, all Hymenoptera except for a scarab beetle (Table 1). *H. caudacutus* has been recorded feeding on a variety of insects from 8 orders (Barker & Vestjens, 1989). This is the first observation of this species taking vespid wasps in Australia, although bees, including *Apis mellifera* L., have been recorded in the diet (Lea 1938).

Winged ants were the commonest prey (Table 1). The worker ants ingested were probably attached to flying alates, since it is unlikely the bird was foraging on the ground. Flying ants have been observed in the diet of *H. caudacutus* by a number of authors (see references in Barker & Vestjens 1989). Other species of swift have been found to feed on winged ants (Lack & Owen 1955; Smyth 1980; Barker & Vestjens 1989). They also form a dominant but seasonally variable part of the diet of two species of cave swiftlet at Niah Cave, Sarawak (Harrison 1976).

**Table 1.** Insect prey in the stomach of a male *H. caudacutus*.

PREY	FREQUENCY (n)
HYMENOPTERA	
Formicidae	
<i>Pheidole</i> sp. alates	613
<i>Pheidole</i> sp. workers	4
Vespidae	
<i>Ropalidia romandi</i> (Le Guillou)	3
<i>Ropalidia socialistica</i> (Saussure)	1
COLEOPTERA	
Scarabaeidae	
scarab beetle	1

Like other swifts (eg. Lack & Owen 1955), *H. caudacutus* probably feeds on a wide range of airborne insects, exploiting situations where insects are superabundant, such as swarms of winged ants. As a result, the stomach contents will be dominated by one species of insect as in this instance. This does not reflect a specific prey preference, but local abundance of one of a large range of prey species.

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